

CLAIMS

WHAT IS CLAIMED IS:

- 1 1. A method of electrically and optically testing a planar lightwave circuit
2 comprising:
 - 3 placing the planar lightwave circuit on a test fixture, the test fixture
4 including a printed circuit board;
 - 5 electrically coupling the printed circuit board to the planar lightwave circuit;
 - 6 electrically coupling the printed circuit board to a tester;
 - 7 optically coupling the planar lightwave circuit to the tester; and
 - 8 performing electrical and optical testing on the planar lightwave circuit.
- 1 2. The method of claim 1, further comprising:
 - 2 holding the planar lightwave circuit in place using a vacuum.
- 1 3. The method of claim 1, wherein electrically coupling the printed circuit board
2 to the planar lightwave circuit further comprises:
 - 3 soldering wires from the printed circuit board to the planar lightwave circuit.
- 1 4. The method of claim 3, wherein electrically coupling the printed circuit board
2 to a tester further comprises:

3 attaching an electrical connector to the printed circuit board, the electrical
4 connector coupled to the tester via a ribbon cable.

1 5. The method of claim 1, wherein electrically coupling the printed circuit board
2 to the planar lightwave circuit further comprises:

3 wirebonding wires from the printed circuit board to the planar lightwave
4 circuit.

1 6. The method of claim 5, wherein electrically coupling the printed circuit board
2 to a tester further comprises:

3 attaching an electrical connector to the printed circuit board, the electrical
4 connector coupled to the tester via a ribbon cable.

1 7. The method of claim 1, wherein electrically coupling the printed circuit board
2 to the planar lightwave circuit further comprises:

3 using a conductive epoxy and wires to electrically couple the printed circuit
4 board to the planar lightwave circuit.

1 8. A test fixture comprising:
2 a first area for placing a printed circuit board;
3 a second area for placing a hybrid PLC, the second area having one or more
4 holes coupled to a vacuum cavity;
5 a vacuum interface to provide suction in the vacuum cavity.

- 1 9. The test fixture of claim 8 further comprising:
2 an attachment interface for holding the printed circuit board in place.
- 1 10. The test fixture of claim 9 further comprising:
2 a clamp to hold the printed circuit board to the test fixture.
- 1 11. The test fixture of claim 8 further comprising:
2 an attachment interface for holding the hybrid PLC to the test fixture.
- 1 12. The test fixture of claim 8 further comprising:
2 a clamp to hold the hybrid PLC to the test fixture.
- 1 13. A test fixture comprising:
2 a vacuum interface for providing suction to an inner cavity of the test fixture,
3 the inner cavity coupled to an outer surface through one or more holes;
4 a mounting area for holding a hybrid planar lightwave circuit, wherein the
5 one or more holes are within the mounting area; and
6 a printed circuit board having a first interface for coupling to a tester
7 connector and a second interface for coupling to the hybrid planar
8 lightwave circuit.
- 1 14. The test fixture of claim 13 further comprising:
2 clamps to hold the printed circuit board to the test fixture.

1 15. The test fixture of claim 13, wherein the second interface of the printed circuit
2 board comprises wire bond interfaces.

1 16. The test fixture of claim 13, wherein the second interface of the printed circuit
2 board comprises electrical pads for soldering.

1 17. The test fixture of claim 13, wherein the inner cavity is split into two or more
2 vacuum channels.

1 18. The test fixture of claim 17, wherein the two or more vacuum channels are
2 substantially parallel.